

Appl. No. 10/789,735
Amdt. dated October 21, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2676

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 9. (canceled)

10. (previously presented) A method of texturing a pixel, the method comprising:
storing a texture argument in a general purpose register of a register file;
issuing a texture command to a texture request buffer, wherein the texture command is associated with the texture argument;
retrieving the texture command from the texture request buffer;
retrieving the texture argument from the general purpose register;
executing the texture command to produce a final texture value;
storing the final texture value in the register file;
locking the general purpose register to prevent changes to the texture argument in response to issuing a texture command; and
following storing the final texture value, unlocking the general purpose register.

11. - 21. (canceled)

22. (previously presented) A graphics processing subsystem, comprising:
an execution unit comprising a texture request buffer and a register file, the register file including a plurality of general purpose registers, wherein the execution unit is adapted to issue a texture command to the texture request buffer and to store a texture argument in the register file;
a texture unit adapted to read the texture command from the texture request buffer and to retrieve the texture argument from the register file;

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wherein the texture unit is further adapted to retrieve a portion of a texture map in response to the texture command, to compute a final texture value from the portion of the texture map, and to store the final texture value in a destination register of the plurality of registers of the register file; and

wherein the execution unit is further adapted to lock the destination register to prevent changes to the texture argument in response to issuing a texture command and to unlock the destination register in response to the texture unit storing the final texture value in the destination register.

23. (previously presented) A graphics processing subsystem, comprising:
an execution unit comprising a texture request buffer and a register file, the register file including a plurality of general purpose registers, wherein the execution unit is adapted to issue a texture command to the texture request buffer and to store a texture argument in the register file;

a texture unit adapted to read the texture command from the texture request buffer and to retrieve the texture argument from the register file;

wherein the texture unit is further adapted to retrieve a portion of a texture map in response to the texture command, to compute a final texture value from the portion of the texture map, and to store the final texture value in a destination register of the plurality of registers of the register file;

wherein the execution unit is adapted to store the texture argument in a source register of the plurality of registers, wherein the source register is separate from the destination register; and

wherein the execution unit is adapted to lock the source register to prevent changes to the texture argument in response to issuing a texture command and to unlock the source register in response to the texture unit retrieving the texture argument from the register file.

24. (previously presented) A graphics processing subsystem, comprising:

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an execution unit comprising a texture request buffer and a register file, the register file including a plurality of general purpose registers, wherein the execution unit is adapted to issue a texture command to the texture request buffer and to store a texture argument in the register file;

a texture unit adapted to read the texture command from the texture request buffer and to retrieve the texture argument from the register file;

wherein the texture unit is further adapted to retrieve a portion of a texture map in response to the texture command, to compute a final texture value from the portion of the texture map, and to store the final texture value in a destination register of the plurality of registers of the register file;

a second execution unit comprising a second texture request buffer and a second register file, the second register file including a plurality of general purpose registers, wherein the second execution unit is adapted to issue a second texture command to the second texture request buffer and to store a second texture argument in the second register file; and

wherein the texture unit is further adapted to read the second texture command from the second texture request buffer, to retrieve the second texture argument from the second register file, to retrieve a portion of a second texture map from the texture memory in response to the second texture command, to compute a second final texture value from the portion of the texture map, and to store the second final texture value in a destination register of the plurality of registers of the second register file.

25. (original) The graphics processing subsystem of claim 24, further comprising:

a multiplexer switch adapted to alternately connect the first execution unit and the second execution unit with the texture unit.

26. (original) The graphics processing subsystem of claim 25, wherein the texture unit is connected with the first execution unit and the second execution unit according to a round robin schedule.

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27. (original) The graphics processing subsystem of claim 25, wherein the texture unit is connected with the first execution unit and the second execution unit according to a priority function adapted to maximize the performance of the graphics processing subsystem.

28. (canceled)